



FOREST MANAGEMENT UPDATE

Number: 13

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Bambi -- Friend or Foe of the Forest?

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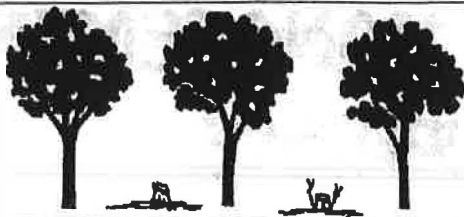
- Forest Stewardship: The Treasure of Trees
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- Prescribed Burning
- Creating Snags for Wildlife
- A Comparison: Crop Tree Management to Uneven-Aged Management



NORTHEASTERN AREA
State and Private Forestry



FOREST MANAGEMENT UPDATE . . .



. . . For Forestland Managers and Others
Interested in Stewardship of the Forest Resource.

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Cover Picture: Bambi -- Friend or Foe of the Forest? The Forest Stewardship Program encourages multi-resource management. This should include responsible management of wildlife populations to maintain the balance between the plant and animal communities of the forest.

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WRITER-PUBLISHER
Arlyn W. Perkey

WRITER-EDITOR
and
ILLUSTRATOR
Brenda L. Wilkins

PRODUCTION
and
CIRCULATION
Nancy A. Lough

Forest Management Update, a Northeastern Area Technology Transfer periodical, is intended to convey technical forestry information to professional foresters and others involved in managing private non-industrial forestland. Readers are encouraged to share experiences and information with others by submitting articles for publication. Please address correspondence, questions, comments, and potential articles to:

Brenda L. Wilkins
USDA-Forest Service
P.O. Box 4360
Morgantown, WV 26505

(304) 285-1536

Forest Stewardship: The Treasure of Trees

by Arlyn W. Perkey

A few months ago I attended a graduate seminar on stewardship. The first thing we did was talk about "what stewardship is." Many people thought of the Biblical meaning of the term. I was reminded of the parable in which the master gave his servants 5, 2, and 1 talents, respectively, to manage while he was away. The servant given 5 talents invested them wisely and had 10 talents when his master returned. The servant given 2 talents invested his wisely, also, and had 4 talents upon his master's return. But the servant who had been given only 1 talent buried it; and he was severely scolded upon the master's return. Consequently, his talent was taken away and given to the servant who had been given the most and managed it well. Some may argue that this is not a stewardship parable, but to me, it is. As I relate to it, and consider both the forest resources and the people resources (landowners, foresters, wildlife biologists, etc.) in the northeastern United States, then surely we have been given 5 talents. The Stewardship Program is our opportunity to invest those talents wisely.

Subsequently, another experience made me think about stewardship. I visited Alabama not long ago and was exposed to the TREASURE program, the forerunner of the Stewardship Program which is currently being instituted nationwide. TREASURE has been in existence about 15 years — long enough for us to see what a mature Stewardship Program may look like. Bill Moody, Alabama State Forester, described it this way: "TREASURE is a spirit, it's like a religion to those in the program. But you know, it's not a bad religion to have."



I was raised on a farm in Iowa. We didn't have many trees, so I learned to treasure what we had; just as many of today's urban residents treasure the few trees they have.

To really relate to that statement, I had to think back to my youth, before I got so educated. I remember when I was growing up on a farm in Iowa, I developed an intense love of the outdoors and the wild, natural things living in it. I felt protective. I wanted everything to be "taken care of," and I wanted to see things done right. I didn't want the few remaining patches of trees cut down and turned into corn fields. Soil erosion made me angry. I was mad at farmers who didn't use waterways in their fields. (I still remember who they were.) If I could have, I would have stopped all of them from doing those "bad things" and made them do things right. I longed to be in

the forest, and I knew then that was where I belonged. I would have fought for those trees. In fact, my father well remembers how angry I was when I came home from school one day and found that he had cut down a few scraggly-looking old willow trees down by the creek. I was fightin' mad. My comment was, "We didn't have many trees on this farm to begin with, and you had to cut down what there was."

I had spirit then; I didn't know as much as I know now, but I felt strongly about what I thought I knew. My feeling for nature, especially trees and forests, was like a religion to me. My reaction to anything that threatened them wasn't rational; it was emotional. I still long to be in the woods, and I still love nature, but I occasionally wonder if time and all my education, experience, and rational thinking haven't caused me to lose touch with how people feel about their woods. I may now be more likely to take trees for granted because they have become a routine part of my life. However, if they weren't, I know I would greatly miss them. I try to remind myself that although trees, forests, and wildlife may not be an intimate part of many peoples' lives, they may still have that same feeling for them that I experienced in my youth.

The love, anger, and enthusiasm I felt when I was younger have now been tempered with time and understanding. But if understanding tempered those feelings, can't it also enable me to work in partnership with those people I encounter now who are angry about what they have seen in the woods in the past and, like me, want to see things done right? I believe it can. I say this because I've made the decision to cut some scraggly-looking willows down by the creek on my own property soon, and I can't help but wonder if my father will hasten to remind me of the fuss I made over the ones he cut on the farm years ago. The point is, I've gained some understanding over the years, and I think it can help me now as I work with people who might feel as I used to. It may also help me reach out to those who don't have the stewardship spirit yet, but have the potential to develop it.

As land-managing professionals who love nature, we should celebrate the apparent resurgence of interest in the outdoors and use our education and experience to help channel that interest to beneficial ends. We in the Northeast and Midwest have one of the greatest opportunities encountered in many years. We now have a public (including many landowners) that is not indifferent about what we do and



Rod Jacobs, U.S. Forest Service retiree, spends much of his time explaining oak regeneration practices to interested foresters and landowners. Tree shelters, as shown here, improve the probability of success with species that are difficult to regenerate.

how we do it. We have people who see more in trees than just dollars. We have people willing to outwardly express their feelings about the woods. Feelings that in the past might have been regarded as silly or "out in left field" are now legitimate and acceptable.

Having the spirit and the desire to treat the land and forest right is one thing, but what actions really indicate that someone is, in fact, practicing stewardship? To help me define my own opinion about what stewardship is, I found it easiest to first describe what stewardship is not.

For Example, to Me Stewardship is Not:

- A timber harvest that takes the best and leaves the rest with no plans or practices that provide for regeneration of a new stand;



Although people often say they do "selective cutting," what usually happens in the absence of professional management assistance is "take the best and leave the rest," with no provision for regeneration of a new stand.

- A dump along a forest road;
- An abandoned logging road with no waterbars in steep terrain;
- Animal waste deposited directly into streams because of inadequate livestock fencing;
- An unplanned logging operation that permits a skid road to go up a creek;
- Cutting a healthy 18" dbh American Chestnut;
- An excessively high deer population that prohibits "tasty" plants from reproducing;

- An off-road-vehicle trail that goes through creeks and straight up hills with no provisions for drainage structures;
- Having 100 forested acres of various ages and stand conditions, a wide range of available technical forest management assistance, and an indifferent attitude that condones doing nothing. (Remember the servant who buried his talent.)



Unplanned off-road-vehicle trails that run through creeks and straight up hills can cause serious erosion problems.

To Me, Stewardship Is:

- A love for the land and the plants and animals that inhabit it;
- Forest management that is planned to accomplish landowner objectives without impairing the capability of the land to produce similar benefits for future generations;
- The desire to leave the land and forest in as good or better condition as it was when entrusted to the current owner;
- Thinking of others and their needs (current and future) as well as personal needs;
- Talking with others about caring for the land, the forests, and the people.



Forest Stewards take pride in the management activities being carried out on their property and are often anxious to talk with others about it.

Notice how the list of examples of "what stewardship is not" is very specific. It includes many of those things I have seen, but didn't like. Things that even if I didn't express it at the time, made me mad deep down. The list of "what stewardship is" appears more general and philosophical. If a landowner has the stewardship spirit as described under "what stewardship is", then the things listed under "what stewardship is not" don't happen. Or at least if they do, it is not intentional or because of indifference.

If we can agree on what stewardship is and is not, how do we use our education and experience to help landowners practice it? How do we invest those 5 talents (natural and human resources) wisely? Like most good investments, especially long-term ones, they require some planning. That's why stewards need a Stewardship Plan.

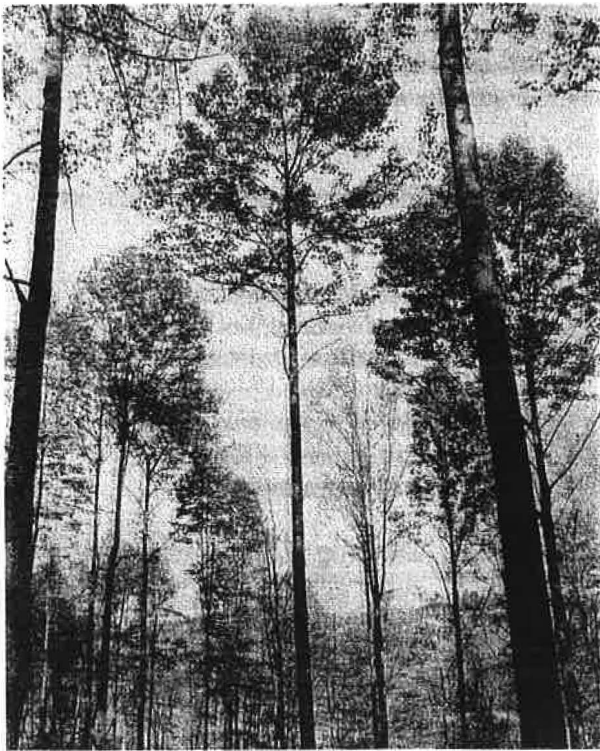
A Landowner Stewardship Plan begins with an interview (preferably face-to-face) to learn the landowner's overall interests and objectives for the property. This should then be recorded and included in the plan. As a minimum, the following also need to be included:

1. A property map showing the location of each forest stand to be included in the plan.
2. A brief description of each stand, including the forest type and size class.
3. The landowner's objective(s) for each stand.
4. A prescription for each stand that will accomplish the landowner's objective(s). For an individual stand, a valid prescription may be to do no treatment at the current time.

When preparing a Landowner Stewardship Plan, it is important to remember that it is an opportunity to help build the landowner's spirits (ie., their love for the land and their desire to do what is right for the resource, for themselves, and for others). Forest stewards are special people. They deserve a well-prepared plan with a professional look that both they and the land manager can be proud of. Getting the right land with the right plan and the right landowner can be the combination that results in outstanding future forest stewards.

Once the Landowner Stewardship Plan is in hand, how does the actual on-the-ground work get carried out? That depends on what needs to be done. For example, if the prescribed treatments can be accomplished with a commercial timber sale, the services of a consulting forester might be recommended. If needed treatments require non-commercial investments, cost-share programs may be used to help accomplish them. The Forestry Incentives Program (FIP) and the Agricultural

Conservation Program (ACP) are two examples of federal programs that could be used to help do prescribed work. State cost-share programs may also be available. If the needed treatments are not consistent with the objectives of these programs, consider using a new cost-share program called the Stewardship Incentive Program (SIP). It is designed to be a tool to help get needed stewardship work done on private non-industrial forestland. Intended to be a very broad program, it has cost-share practices tailored to meet local needs. It might include practices such as building recreational trails, releasing apple trees for wildlife, and creating forest openings. SIP provides us with a broad array of cost-share practices that can be used to accomplish a wide range of landowner objectives.



Many forest stewards are motivated by the desire to leave the land and forest in as good or better condition as it was when entrusted to them. If needed treatments require non-commercial investments, cost-share programs like FIP, ACP, or SIP may be used to accomplish them.

SUMMARY

In summary, "the times, they are changin'". There are clear indications that the era of landowner and general public indifference toward forestland is passing or has passed. While that brings us new challenges, it also brings great opportunities. To capitalize on the opportunities, we have some new tools available in the form of the Stewardship Program and the Stewardship Incentive Program. These tools, wisely utilized with the human and forest resources we have (our 5 talents), give us the chance to embark on a Stewardship Era. Perhaps the idealism of my youth will be realized after all.

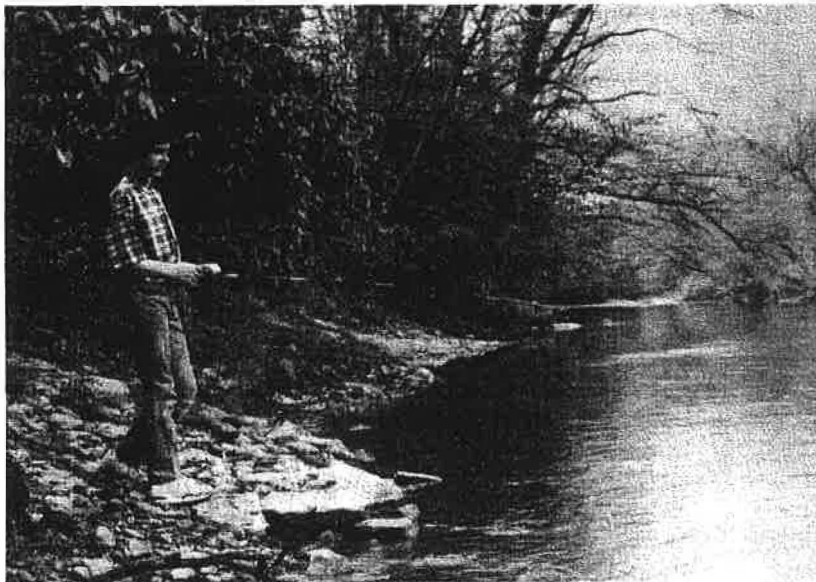
West Virginia's Forest Stewardship Program

by Robert Whipkey
Assistant Administrative Forester - Management
West Virginia Division of Forestry

In 1988, a legislatively-appointed Forest Management Review Commission organized a task force to create a "Strategic Plan" to "further develop West Virginia's forest resources." One of the participants stated:

"The stewardship of our forests should not be taken lightly. Our forests are a complex of complexities and so a balanced approach is both desirable and necessary. Only by balanced multiple-use management will we be able to protect this all-important natural heritage for future generations while also enjoying its abundance to the fullest today."

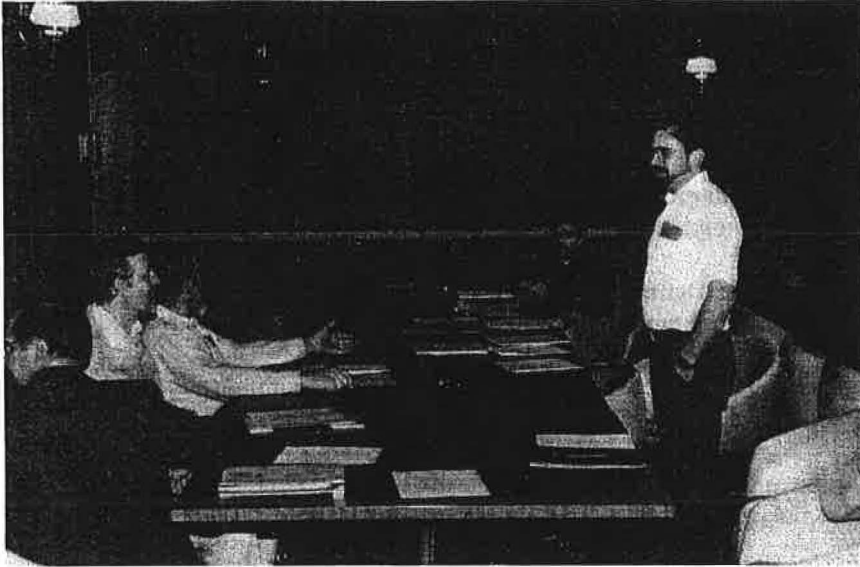
Of the 12 maxi-goals cited in the 1988 Strategic Plan, three deal directly with non-industrial private woodland owners. They are:



Most of the outdoor recreation in West Virginia is dependent upon benefits provided by its abundant forests. These benefits include hunting, fishing, boating, hiking, nature study, and beautiful fall foliage.

1. Provide incentives to forest landowners, both through technical assistance and through tax breaks for landowners who practice multiple-use forest management.
2. Develop multiple-use forest management plans for the 250,000+ non-industrial private woodland owners in West Virginia and provide sufficient technical assistance (professional foresters) to meet landowner demand.
3. Develop and coordinate educational programs directed at forest landowners and other West Virginians.

One of the major obstacles to accomplishing these three goals is the inadequate number of professional foresters available to assist non-industrial private forest landowners. A report published by the USDA-Forest Service indicates that in the 20 Northeastern Area states, there is only one professional forester available per 109,000 acres of non-industrial private forestland. West Virginia is well below this average with only one professional forester per 123,400 acres of non-industrial private forestland.



While waiting for other Stewardship Committee members to arrive, Bob Whipkey (standing) invites WVU Extension Wildlife Biologist Bill Grafton to serve as an instructor at a training session for consultants who will prepare Stewardship Plans.

When the 1990 Farm Bill brought the Forest Stewardship Program into existence, the subsequently formed Forest Stewardship Committee decided to support the precepts of the 1988 Strategic Plan. West Virginia's Forest Stewardship goal is to have 800,000 acres of actively-managed land in the program within five years. The Committee recognizes this is a rather ambitious goal and realizes that the inadequate number of professional foresters is a critical and potentially limiting factor frustrating its attainment.

In light of this, the Stewardship Committee adopted a rather unique strategy of using the federally-appropriated dollars to

contract with private-sector professional foresters to develop forest stewardship plans modeled after a plan approved by the Stewardship Committee. The logic is as follows:

1. State government will never fund forestry agencies sufficiently to provide the number of professional foresters needed to meet even the short-term goals of the Stewardship Committee.
2. Federal dollars cannot be relied on to meet the long-term planning needs of non-industrial private landowners.
3. Potentially short-term federal dollars can be used most efficiently and effectively if directed at increasing the number of professional foresters working in the private sector.

We've been faced with the "chicken or the egg scenario." To meet the stewardship acreage goal, landowners must be aware of the program and educated regarding its potential to produce benefits through management of their forest resources. This awareness and education creates demand for service. Once the large-scale demand for plans is created, how does West Virginia efficiently and quickly service the demand without enough professional foresters available to do the work? Conversely, how do we secure an adequate professional forester workforce without sufficient initial demand for work? Which comes first, the demand for the service or the workforce available to provide the service?

In West Virginia, the demand for management plans has already been set by the Managed Timberland Tax Regulations adopted in early 1990. This demand for service is expected to be explosive, adding to the need to culture a private workforce capable of handling the increased workload of writing comprehensive forestland management plans.

This is how the first year, 1990, Stewardship Program was accomplished:

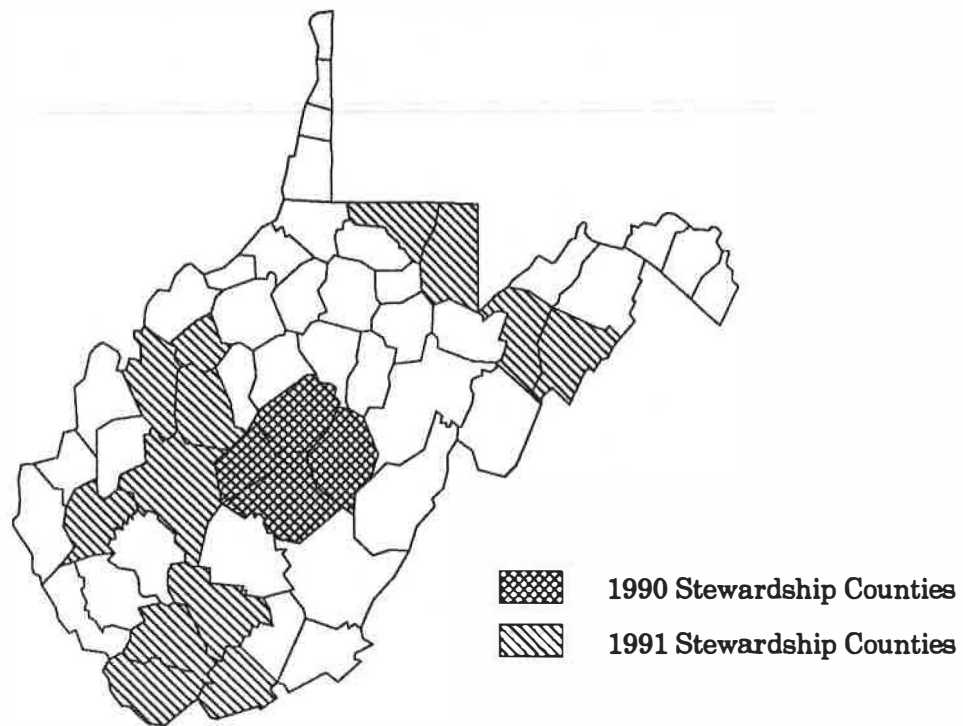
1. Through excellent cooperation with the USDA-ASCS, a Stewardship plan sign-up was conducted in four adjoining pilot counties (Braxton, Clay, Nicholas, and Webster). This resulted in 176 applications for Stewardship plans on 30,000 acres.
2. Applications were sorted into 20 packets of approximately equal acreage. These packages were offered to consulting foresters using a lottery-type drawing.
3. Agreements were signed with each participating consultant, establishing stewardship-planning procedures, technical planning guidelines, performance deadlines, and payment procedures.
4. Consulting foresters were asked to submit each plan as soon as it was completed, along with inventory data used to develop stand prescriptions and recommendations.
5. Each plan was reviewed to insure that inventory data was sufficient, prescriptions were technically correct, and the plan was written in the agreed-to format.
6. Each plan was placed in a specially-prepared folder and mailed to the new forest steward. A follow-up visit was scheduled by a Division of Forestry forester who discussed the plan with the landowner and presented him/her with a Stewardship certificate.



Seventy-nine percent of West Virginia's surface area is forested, and the trees are annually growing at nearly four times the harvest rate. With the help of consulting foresters, the State hopes to have 800,000 acres of forestland under active Forest Stewardship management plans within the next five years.

Fourteen consulting foresters participated in the 1990 Forest Stewardship Program. Ten developed or purchased computer software to help them prepare the plans. Eight purchased computer hardware to accomplish the work. Seven of the 14 participants hired additional temporary or permanent staff to assist with the extra workload.

The 1991 program has been expanded to include 13 more counties (Grant, Hardy, Jackson, Kanawha, Lincoln, McDowell, Mercer, Monongalia, Preston, Raleigh, Roane, Wirt, and Wyoming). The counties are clumped, but the clumps are dispersed into the eastern, southern, western, and northern portions of the state.



The 1991 sign-up resulted in 247 Stewardship plan applications on 55,000 acres. Thirty-four consultants have expressed an interest in working on the program in 1991. Stewardship training sessions have been conducted for consultants, Division of Forestry personnel, and some industrial foresters. Upon completion of workshops sponsored by the Division of Forestry, participating professional foresters will be certified to prepare comprehensive Stewardship plans for non-industrial private woodland owners. Stewardship plan accomplishments are expected to approach 100,000 acres in 1991.



Implementation of the Managed Timberland Tax Regulations and the Stewardship Incentive Program cost-share practices are expected to increase the demand for Stewardship plans. Using three-quarters of the federal Stewardship dollars to contract with consulting foresters to write Stewardship plans will swell the ranks of professional foresters working in West Virginia. This will not only increase the number of acres with a Stewardship plan prepared during the five-year period, but it will have profound effects on forest management far into the twenty-first century.

West Virginia's forests are inhabited by abundant and diverse wildlife, which is the reason the State ranks sixth nationally in the sale of nonresident hunting licenses.

The Forest Stewardship & Stewardship Incentive Programs: New Programs for Technical Assistance and Cost-Sharing for Private Non-Industrial Forestland

by Susan E. Lacy
Forest Resources Management Specialist
USDA - Forest Service

Introduction:

Forest Stewardship, as defined by the 1990 Farm Bill, consists of two major components: the Forest Stewardship Program and the Stewardship Incentive Program (SIP). These federally-funded programs, developed by the National Association of State Foresters and the USDA Forest Service, are administered through state forestry agencies. The Forest Stewardship Program provides information, education, and technical assistance to landowners through preparation of written Stewardship plans to guide the management of the private non-industrial forest. Subsequently, the Stewardship Incentive Program provides financial assistance to landowners for implementation of the practices outlined in their Stewardship plans.

Legislation and Funding:

In October, 1990, Congress passed the Farm Bill, including a Forestry Title authorizing the Forest Stewardship and the Stewardship Incentive Programs. The authority and responsibility for the



State Stewardship Coordinating Committees advise the State Forester on Stewardship Program activities and make recommendations regarding SIP practices and priorities.

administration of these programs are delegated through the USDA-Forest Service to the State Forester in each state. The bill calls for the establishment of a State Stewardship Coordinating Committee with membership that may include representatives of the following groups: the Forest Service, Extension Service, Soil Conservation Service, Agricultural Stabilization and Conservation Service, State forestry agencies, fish and wildlife agencies, environmental and conservation groups (e.g. Sierra Club, Izaak Walton League, Audubon Society), soil and water conservation districts, consulting foresters, forest landowner associations, forest industry groups including Tree Farm, and land trust organizations. The Committee has

a crucial role of advising the State Forester on Forest Stewardship activities, making recommendations on SIP practices and priorities, and suggesting eligible tracts for the Forest Legacy Program (also part of the 1990 Farm Bill).

In 1990, Congress appropriated \$6 million to initiate Forest Stewardship. Of this total, the Northeastern Area was allocated \$1.9 million. Each state received \$25,000 to assist in developing an initial Stewardship Plan plus a proportionate share of the remaining funds, based on number of non-industrial private forest acres in each state. Funding for Fiscal Year 1991 increased significantly. Congress appropriated \$12.5 million for Forest Stewardship and \$20 million for SIP. The expected funding for FY 1992 is even more encouraging. Funds for Forest Stewardship will be proportionately allocated to the states based on the number of non-industrial private forest acres and the estimated number of landowners. SIP funding will be allocated in a similar manner with additional emphasis on the state's past performance in the program.

The Forest Stewardship Program:

Traditionally, timber has been considered the primary forest resource, largely because of its commodity value. The Forest Stewardship Program, modeled after the TREASURE Forest Program in Alabama, aims to elevate all forest resources to the importance level of timber. TREASURE is an acronym which stands for:

Timber
Recreation
Environment
Aesthetics for a
Sustained
Useable
REsource



The philosophy of the Stewardship Program is to encourage long-term stewardship by assisting owners to actively manage their land for a broad range of resources. This recreation trail provides the opportunity to enjoy these white pines pruned to produce high value timber products while providing cover for wildlife.

The philosophy of the Forest Stewardship Program is to encourage long-term stewardship of non-industrial private forests by assisting owners to actively manage their forest resources. It encourages use of existing state, federal, and private sector resource management expertise and assistance.

There are approximately 330 million acres of non-industrial private forestland in the United States — 108 million acres of which are in the Northeastern Area. The quantifiable national goal of the program is to place 25 million acres of non-industrial private forestland under Stewardship management over the next five years. The goal for the 20-state Northeastern Area is to place 10 million acres under Stewardship management during that five-year period.

States must report their annual accomplishments in acres placed under Stewardship management and number of landowner Stewardship plans written. While accomplishing these goals, other benefits will be realized, such as:

- Sharing ideas about forest resource management and building partnerships among the agencies and organizations represented on the State Stewardship Coordinating Committee.
- Ensuring that all forest resources are treated equitably.
- Improving fish and wildlife habitat and protecting threatened and endangered species.
- Relieving some resource use pressures on public lands.
- Providing assistance to landowners prior to timber harvesting. This reduces environmental impacts and regeneration costs, subsequently reducing the need for long-term government expenditures.

Stewardship Activities at the State Level:

Forest Stewardship Program activities at the state level may be grouped into three broad categories: Awareness and Information, Education, and Implementation. In order to participate in any program, people must first be aware of it. Research results have shown that significant numbers of landowners surveyed do not know who to contact for forestry information or assistance. Getting the Forest Stewardship Program message out to landowners and others who would be interested is crucial to success. Some of the methods currently being employed to increase awareness are brochures, television and radio spots, magazine articles, videos, and displays. Points of contact include service forestry, SCS, and ASCS offices, as well as state and county fairs or other locations likely to attract the public's attention.



When developing a Stewardship Plan, it is important to interview landowners to assess their interests and help them articulate objectives. Although the Stewardship Program emphasizes reaching forest landowners who have not actively managed their forests in the past, it does not exclude those who are currently managing their woodlots.

Employing a combination of awareness activities should serve to stimulate the interest of forest landowners. It is necessary to have a delivery system in place to service landowner requests for information and technical assistance. Foresters and other natural resource professionals need to be familiar with the basic philosophy of the program as well as the guidelines for writing Stewardship plans and recording accomplishments. The education phase of the program includes learning opportunities for the public, which may be in the form of workshops or field days. Demonstration areas are another viable means of providing educational opportunities by illustrating a variety of forest management techniques.

The implementation phase primarily involves the development and preparation of the landowner Stewardship plan. This is the opportunity for the natural resource professional to have a direct contact interview with the landowner to determine interests and desires and ultimately agree on the landowner's objectives for managing the forest. The resource professional should offer the landowner a full range of alternatives for managing the property, taking into consideration and addressing all forest resources.

The Forest Stewardship Program emphasizes reaching landowners who have not actively managed their forests in the past. However, committed forest managers like Tree Farmers or others already actively implementing a forest management plan will not be excluded. In fact, these landowners may provide excellent role models for those who are currently unfamiliar with forest management.

What makes Stewardship management different from previous management? Depending on how the natural resource professional has done business in the past, there may be only slight differences or none at all. However, for many resource professionals, the Forest Stewardship Program provides an opportunity to offer their landowner clients something different, often more than they could offer before.

- Stewardship considers all resources for both their amenity and commodity values.
- Stewardship practices are based on a land ethic; a long-term view of the forest community.
- Stewardship provides landowners with as much information as practical about their forest resources and options for managing them. Agreed-upon landowner objectives then become the driving force in the development of the Landowner Stewardship Plan.



The primary source of forestland erosion is access roads. SIP does not cost-share road construction, but it will cost-share the expense of having the road located by a forester.

The Stewardship Incentive Program:

The Stewardship Incentive Program (SIP) is a cost-share program designed to assist non-industrial private landowners in implementing their Stewardship plans. To be eligible for SIP funds, landowners must have an approved Stewardship Plan developed for a 10-year time period. Landowners must be willing to commit to doing the prescribed practices outlined in the plan. Any interested landowner may participate in the Forest Stewardship Program, but only those with less than 1,000 acres may apply for SIP cost-share assistance. Under certain circumstances, the State Forester with the concurrence of the Northeastern Area Director may waive the 1,000-acre minimum rule for landowners holding no more than 5,000 acres. There is no national minimum acreage requirement for eligibility, although individual states may have a minimum, as long as the minimum is not greater than 25 acres. Common minimum acreages adopted by states are 1, 5, and 10 acres. There is a cap of \$10,000 per landowner per fiscal year for SIP cost-share dollars.



The Stewardship Incentive Program includes practices to enhance fisheries habitat and protect and improve soil, water, wetlands, and riparian areas.

Following are nine national program SIP practices:

- Stewardship Plan Development
- Reforestation and Afforestation
- Forest and Agroforest Improvement
- Windbreak and Hedgerow Establishment and Renovation
- Soil and Water Protection and Improvement
- Riparian and Wetland Protection and Improvement
- Fisheries Habitat Enhancement
- Wildlife Habitat Enhancement
- Forest Recreation Enhancement

Under each of these program practices, technical practices and specifications have been developed which must meet or exceed all applicable State and Federal laws as they apply to air and

water quality; wetlands and riparian areas; rare, threatened and endangered species; soil productivity; fire protection; and wood product extraction.

SIP has some similarities and differences with other currently available cost-share programs such as the Forestry Incentives Program (FIP), the Agricultural Conservation Program (ACP), and the Conservation Reserve Program (CRP). The aspects of SIP that differentiate it from the other cost-share programs are:

- Under SIP, county ASCS offices act in a different capacity. Approval of landowner applications for cost-sharing and the inspection of practices are the responsibility of the state Division of Forestry. The percentage of the cost-share (up to 75%) and the priority of practices are determined by the State Forester with recommendations from the State Stewardship Committee.



With fencing as a component in eight of the nine SIP practices, these cows could soon find themselves "out of the woods" and on the "other side of the fence looking in."



The SIP Reforestation and Afforestation Practice includes tree shelters as a cost-shareable measure.

Summary:

The Forest Stewardship and Stewardship Incentive Programs are new tools available to land managers and landowners to positively influence the management of the private non-industrial forest. The degree to which these programs will be utilized remains to be seen. The outlook is promising, however, because of the scope of the programs and the flexibility of each state to implement them using the techniques and practices they judge to be most effective in their areas.

- The range of eligible practices is much broader under SIP than any other federal forestry cost-share program. In other words, SIP provides a landowner with a source of financial assistance not previously available to carry out practices. SIP provides for wildlife habitat enhancement (including protection of threatened and endangered species), fencing, recreation trails, and streambank stabilization, just to name a few. Tree planting, timber stand improvement, and site preparation for natural regeneration are eligible practices under SIP, but it is recommended that available FIP, ACP, and CRP funds be used for these practices whenever possible.
- In the initial start-up years of SIP, a state may elect to use up to 25% of the funding to cost-share the preparation of landowner Stewardship plans. States may also elect to allocate up to 10% of the funding for program administration.



The range of eligible practices is much broader under SIP than any other federal forestry cost-share program. For example, SIP includes practice components that provide for wildlife habitat enhancement, fencing (to exclude livestock or excessively high wildlife populations), and recreational trail development.

Prescribed Burning: An Oak Management Tool On The Green Mountain and Finger Lakes National Forests

by Robert R. Burt
Forest Silviculturist
Green Mountain National Forest

Because of its importance as a food source for wildlife and its value as a wood product, oak is a key forest resource on both the Green Mountain National Forest in Vermont and the Finger Lakes National Forest in southcentral New York. Consequently, the oak type is an important vegetative community to maintain as a component of New England and New York's diverse forest ecosystem. Although oak occurs on only about one percent of the Green Mountain, it comprises most of the Finger Lakes National Forest. On a larger scale, oak occurs on four percent of Vermont's forestland and 11 percent of New York's. The Forest Plans for both of these national forests require the oak type to be maintained and, where feasible, expanded.

In 1977, Dr. Ralph Nyland from Syracuse University started research on the use of prescribed burning and shelterwood cutting to regenerate oak. Eight stands were prescribed burned between 1977 and 1988 on state lands. Four of the stands were subsequently reburned to compare the effects of a second treatment. As part of the same research effort, seven stands on the Finger Lakes National Forest received prescribed burning treatments.



In areas where little advanced oak regeneration exists, a prescribed burn followed by a shelterwood cut can facilitate establishment, especially when timed with a good seed year.

Prescribed burning has been successful in establishing oak regeneration in northern hardwood-oak (transition hardwood) stands. Oaks are generally more competitive in stands that have been burned than are the thinner barked northern hardwoods. Oak sprouts thrive after burning while the sprouts of northern hardwoods tend to be less vigorous. The key to success is a low-intensity burn conducted soon after leaf emergence in the spring. Burning is especially effective in reducing competition from striped maple and beech. A second burn may be required if red maple competition is severe.

Prescribed fires that burn too hot can interfere with the accomplishment of stand objectives. For example, at one site on the Green Mountain National Forest, beech trees were retained as a part of the residual overstory. However, the hot fire killed the existing oak seedlings and the residual beech mast trees. The influx of light promoted extensive sprouting of red maple and beech. As a result, oak now comprises less than 10 percent of the new stand.

On some sites, little advanced oak regeneration is present. Prescribed burning followed by shelterwood cutting during a good seed year can facilitate the establishment of oak regeneration. Summer logging that creates good soil scarification is an additional treatment practice which can increase the probability of successfully establishing oak seedlings.

It is important to have public support for prescribed burning before using the technique. In this area, the public's previous experience with prescribed burning to perpetuate wildlife openings was a key factor in assuring them prescribed burning was safe and effective. Although the risk of having a fire escape will always be a concern, use of the BEHAVE computer fire model to evaluate conditions and to predict fire behavior can minimize the risk. Also, as personnel gain experience using the technique, the probability of having an escaped fire is reduced.

Some questions remain. What is the best timing for burning and shelterwood cutting? Can oak be managed using single-tree-selection silviculture if northern hardwood regeneration is controlled using fire? If a good seed crop does not occur when needed, can planting and tree shelters be substituted for prescribed burning? Is there a need for crop tree release after stand establishment, and if so, when? What impact will gypsy moth have on the viability of these treatments?



Prescribed burning and shelterwood cutting are viable components in the long-term process of regenerating oak.

The last gypsy moth outbreak convinced us that the moth rather than the timber sale plan dictates the scheduling of oak management activities. An oak management plan will be developed for the Green Mountain that predicts gypsy moth outbreaks and schedules timber sales and prescribed burning between events.

On the Green Mountain and Finger Lakes National Forests, oak regeneration is a long-term process rather than a single event. Prescribed burning and shelterwood cutting can be used to stimulate establishment of oak regeneration. Oak is a key forest resource because of its value as a wood product and its importance to many wildlife species that utilize the mast. The public has clearly indicated to the two national forests their desire to maintain a healthy oak forest and to expand the forest type where feasible. We are eager to accomplish this goal using prescribed burning as a silvicultural tool.

Creating Snags for Wildlife

by Arlyn W. Perkey

This article is based on a combination of my personal experience and information obtained from a literature search by Linda S. Gribko.

When doing Crop Tree Management for landowners with a wildlife objective, give some thought to developing some dead woody habitat. The Animal Inn slogan, "There's life in dead trees," is worth remembering. Because standing dead trees, commonly referred to as "snags," provide excellent habitat for insects, they serve as an important food source for those wildlife species who feed on bugs. They may also be a source of shelter, although it is important to remember that cavities in snags are usually not an adequate substitute for cavities in live trees.



Snags that provide dead woody habitat for wildlife can also be aesthetically pleasing to some landowners.

Girdling is perhaps the best way to create good snags for wildlife. However, this can be a tricky process. For years, foresters have been frustrated trying to kill trees by girdling. It often takes longer than we humans like to wait, and if done improperly, it may not happen at all. I've found double-chainsaw girdling (two complete bands cut well through the bark with a chainsaw) to be fairly effective.

When applying a crown-touching release to selected crop trees, there are four primary considerations in deciding which competing trees to girdle and which ones to fell:

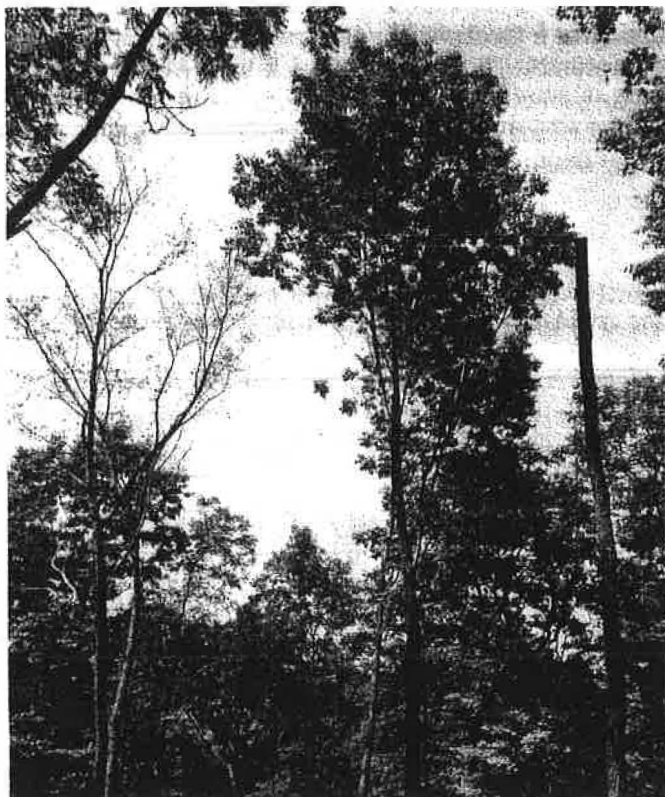
1. Size of Tree

Generally, large trees are more desirable than small ones for recruitment as dead woody habitat. They usually stand longer and can support larger cavities necessary for some species. However, depending on the wildlife species managed for, tall snags may or may not be preferred.

2. Resistance to Death by Girdling

Some trees die fairly quickly after girdling, while others may literally live for years. This resistance to death by girdling varies by species, by individual

tree, and, at least for some species, by season when the girdling is done. The ring-porous and semi-ring porous species transport water from the roots to the crown in the outer ring(s), just inside the cambium. It makes sense that these trees could be killed easily by girdling with a chainsaw. My application of this theory has given me mixed results regarding how quickly the ring porous and semi-ring porous species have died. The following description of my experience with girdling is not based on any scientific experiment; it is based on my observations.



This elm (left) was girdled during the growing season to release the white ash crop tree (near center). Within two months, it had lost most of its leaves and was no longer a serious competitor.

I have girdled elm, ash, and black cherry in southwestern Pennsylvania. Double-chainsaw girdling elm and white ash usually results in a quick kill (within 2 months) if the girdling is done during the growing season (especially from mid-July to mid-September). Generally, trees girdled during the dormant season not only leaf out in the spring, but continue to live for some time. Results with black cherry are more varied. Some trees girdled during the growing season die quickly; others don't. This response from black cherry is consistent with the literature.

I have very limited experience girdling oak. The red oaks I've girdled during the growing season died quickly. This is also consistent with the literature, which indicates that red oak transports water in the outer growth ring only. White oak and black oak did not die as quickly.

It may take several years for a diffuse porous tree to succumb to the effects of girdling. Unlike ring porous and semi-ring porous trees, the diffuse porous species transport water through a greater number of growth rings. Therefore, a quick kill would require such a deep cut into the tree that in most cases it is not feasible. Girdling deep enough to sever many growth rings usually results in an unstable tree that will not stand long. Therefore, diffuse porous species should

generally be considered as snag recruits only when it is acceptable to have trees that die over a period of years.

A diffuse porous tree that has been girdled usually does not die until the roots expire due to the interruption of the food supply, which is normally transported from the crown to the roots. This starvation of the roots may take a long time, especially if the tree is in good condition prior to girdling. Ring porous and semi-ring porous trees may die quickly if girdled during the growing season because the water supply to the crown is severed. Following is a list of eastern trees categorized by porosity:

RING POROUS

Black Cherry*	Elm
Black Walnut*	Ash
Butternut*	Oak
Black Locust	Hickory
Honey Locust	Catalpa
Sassafras	Chestnut
Hackberry	Coffeetree
Red Mulberry	Persimmon*
Osage-Orange	

DIFFUSE POROUS

Maples	Holly
Beech	Hophornbeam
Yellow-Poplar	Hornbeam
Birch	Sourwood
Blackgum	Dogwood
Sycamore	Sweetgum
Basswood	Cucumber
Cottonwood	Aspen
Buckeye	Pines
Spruces & Firs	Hemlock

* These species are semi-ring porous. Bitternut Hickory is also semi-ring porous, but the other hickories are ring porous.

A means of stretching out the availability of snags after a treatment is to girdle some trees in the ring-porous category between mid-July and mid-September, hoping for a quick kill. At the same time, girdle some trees in the diffuse porous category, since they are likely to take quite some time to die. Similarly, another death-delaying tactic for the ring and semi-ring porous species is to girdle during the dormant season rather than the growing season.

3. Snag Durability

Some trees are more resistant to decay; consequently, they will provide dead woody habitat for a longer period of time. The following list categorizes trees according to their decay resistance:

RESISTANCE TO DECAY				
EXTREMELY RESISTANT	RESISTANT	MODERATELY RESISTANT	NON-RESISTANT	
Black Locust Red Mulberry	Cedars Junipers Chestnut Osage-Orange Catalpa Sassafras Black Cherry Black Walnut White Oak Chestnut Oak	Honey Locust Eastern White Pine	Willows Aspen Cottonwood Basswood Buckeye Butternut Cucumber Yellow-Poplar Sweetgum Elm Hackberry	Ash Birch Beech Maple Hickory N. Red Oak Black Oak Hemlock Spruce & Fir Other Pines

If it is desirable to have snags in various stages of decay over a period of time, it may be advantageous to select snag recruits from more than one category. Trees killed in the non-resistant category will provide punky wood relatively soon, and about the time they are falling down, trees in the resistant category will just be getting punky.

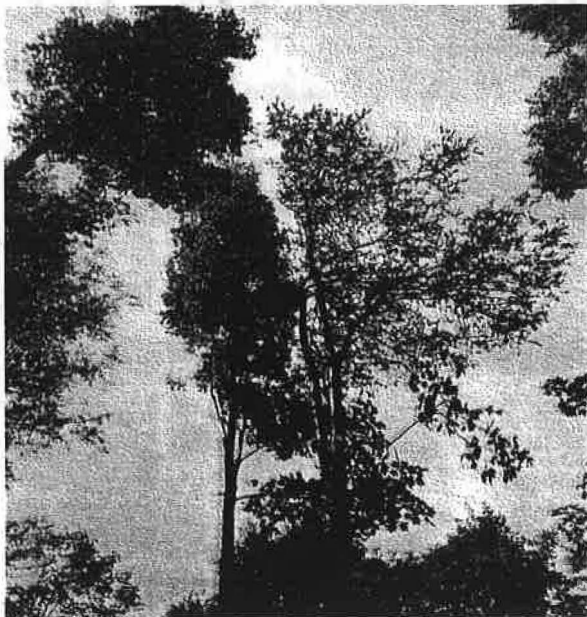
Another factor affecting snag durability is the degree of lean of the tree. Trees that lean significantly are less likely to stand for a long period of time.

4. Potential Forest Pest Impacts

Creating snags to benefit wildlife may have some health implications for the crop trees remaining in the stand. For example, as indicated in Issue 12 of the *Forest Management Update*, girdling black cherry snags may provide conditions for a build-up of bark beetles that cause gum spots, a serious degrade in black cherry. Black cherry is resistant to decay, which makes it a desirable recruitment choice for a relatively long-lived snag. There may be a necessary trade-off between providing dead woody habitat for wildlife and some loss of timber value in residual crop trees due to gum spots. This value loss may be mitigated by killing the snag recruits between July and January so the dying trees do not create favorable habitat for bark beetles. However, especially with black cherry, timing the girdling so death will reliably occur between July and January may be difficult.



The storm damaged elm (left) was girdled during the dormant season to release the black cherry crop tree (center). Ten months later, the elm was still green and competing with the crop tree.



This black cherry (right) was girdled during the growing season to release adjacent sugar maple crop trees. It happened to die quickly (some don't), and due to its resistance to decay, it should provide dead woody habitat for several years.

MAKING SNAG RECRUITMENT DECISIONS

Following are steps that can help in making good choices for selection of trees to convert to snags:

1. Interview the landowner to be sure that his/her stand specific wildlife management objectives can be accomplished by recruiting snags. For example, is the landowner interested in providing habitat for pileated woodpeckers?
2. Inventory the stand. Determine the species composition, size (diameter breast high & height), and number of trees/acre that need to be cut or deadened to release the crop trees.
3. Analyze the size and species of potential snags, and evaluate how selection of a combination of species and/or season of treatment could be used to spread out the availability of dead woody habitat. Keep in mind, if there are many snags remaining in the stand at the time the next management activity is to occur, they could pose a hazard to people doing that work.
4. Consult with a wildlife biologist to determine the size class and number of snags needed to accomplish species-specific wildlife management objectives. Compare these needs with the inventory to see how they match up.
5. Evaluate the potential adverse impacts of creating snags in any particular species. For example, will creation of snags of any species cause forest health problems (may need consultation with entomologist or pathologist)? Or, will delayed death of competitor trees cause undue loss of growth or health risk for the crop trees?
6. Select the species and size mix of snags that will best meet the wildlife management objective for the stand without adversely impacting the other stand specific objectives. Select individual trees that lend themselves well to girdling (ie. the absence of seams or other indications of ingrown bark that could prevent a complete girdle of the tree).

Girdling trees can be a valuable tool to create dead woody habitat needed to accomplish stand specific wildlife management objectives. Using the preceeding information to make informed choices regarding which trees to girdle and when to girdle them can enhance the land manager's ability to maximize benefits produced by minimizing the conflict between stand specific objectives.

A Comparison: Crop Tree Management To Uneven-Aged Management

by Arlyn W. Perkey

Uneven-aged Management: What Is It?

Uneven-aged management is a timber management system. It was developed in Germany in another century to regulate the flow of timber products from forestland. It was not designed to produce multiple-use benefits on a stand-specific basis as is commonly demanded from our forests today. The fact that it was developed long ago and far away does not make it inherently bad or inadequate, but it should cause us to periodically ask ourselves if it is a forest management system we want to use in eastern hardwoods.

When referring to uneven-aged management, it is important to recognize that many people, including foresters, have vastly different perceptions about what it means. To some it is classical uneven-aged management. This implies a specified minimum basal area after harvest, a stand structure objective defined by the ratio of the number of trees in one diameter class divided by the number of trees in the next larger diameter class, and a largest tree diameter above which trees are considered to be mature and ready for harvest. Regeneration may occur when individual trees or groups of trees are removed.



An even-aged stand prior to cutting.



The same stand after an improvement cut. In stands that have no previous management, an improvement cut is often the first timber management step in conversion to an uneven-aged stand.

In previously unmanaged stands, often the first cut is an improvement cut in which relatively few trees are removed because they have reached the specified largest tree diameter limit. Most of the cut trees are selected for removal due to defect caused by rot or poor form. In subsequent cuts, more emphasis is placed on developing the desired stand structure. Very little classical uneven-aged management is done on a widespread production basis. Most of the good examples we have are research applications like those found at the Fernow Experimental Forest near Parsons, WV.

To others, uneven-aged management means "take-some-and-leave-some" forestry, which is commonly referred to as selective cutting. This cutting can often be characterized by one of two extremes, depending on who is practicing it. If it is done by a forester or other well-trained and good-intentioned land manager, it is take out the "bad" trees (usually from a timber management perspective) and leave the "good" trees — in essence an improvement cut. If it is done by someone with a short-term profit motive, it is "cut the best and leave the rest", otherwise referred to as "high-grading". Most foresters think of the former as being a good practice and the latter as being a poor practice.

The Need For An Alternative

Public aversion to clearcutting and the passage of the National Forest Management Act in 1976 has caused a dilemma for professional foresters working in the National Forest System. These foresters try to make widespread use of uneven-aged management even though it was not designed to accomplish the multiple-use objectives demanded by today's watchful and concerned public.

Much of the eastern hardwood forest is owned by many private non-industrial landowners. Regulation of their properties to produce an even-flow of timber products (what uneven-aged management was designed to do) is not an important objective for them. Growing and harvesting timber products is usually not their primary reason for purchasing and retaining forestland. Those who are interested in managing their forests are frequently happy to receive timber income, but if that were the only benefit they received, many would sell the land and invest the funds elsewhere. Landowners interested in stewardship of the forest are usually interested in multiple-use management, not just timber management.

Why have so many people turned to uneven-aged management? What attributes give it appeal? I see two things: 1) it provides continuous tree cover, which many private landowners and the general public perceive as good stewardship of the forest, and 2) it provides periodic income for landowners (15-20 year cutting cycles). In contrast, even-aged management has become associated with clearcutting, which in the eyes of many landowners and the public at large, is perceived to be bad. Therefore, uneven-aged management has become associated with environmentally sound forestry. It has been portrayed as the sensitive alternative to even-aged management — a "kinder and gentler" forestry. In response to the wishes of the "environmentally sensitive" public, lawmakers have endorsed uneven-aged management in critical legislation like the National Forest Management Act. This has given the system more legitimacy than it deserves.

Consequently, what we are faced with is this: our forest management heritage has provided us with a timber management system designed to accomplish a timber management goal of regulating the flow of timber products. But we have a clientele that is demanding a multitude of benefits from the forest. How can we realistically expect a single-purpose timber management system to be the most effective and efficient means of accomplishing multiple-use objectives? I submit to you that we cannot. I fear that uneven-aged management is becoming the system of choice by default rather than by design. It is favored because it is more tolerable than its tainted brother, even-aged management. Surely if our profession intends to manage the forest to produce multiple benefits, then it can develop a system for use in our eastern hardwood forests that will best produce those benefits. We must be willing to broaden our horizons and look at some alternatives.

Crop Tree Management: What Is It?

Crop Tree Management is designed for landowners with a stewardship goal and stand specific objectives. Because technical forestry terms are restricted, it improves communication between foresters and landowners. Even on small woodlots, which are common on the private non-industrial forest, multiple-use management is made possible with this system that focuses on producing timber, wildlife, aesthetic, and aquatic benefits.



Most private non-industrial landowners are interested in managing their forests to produce a variety of benefits. Here, released timber and wildlife crop trees (background), are discussed in the shade of an old aesthetic crop tree.

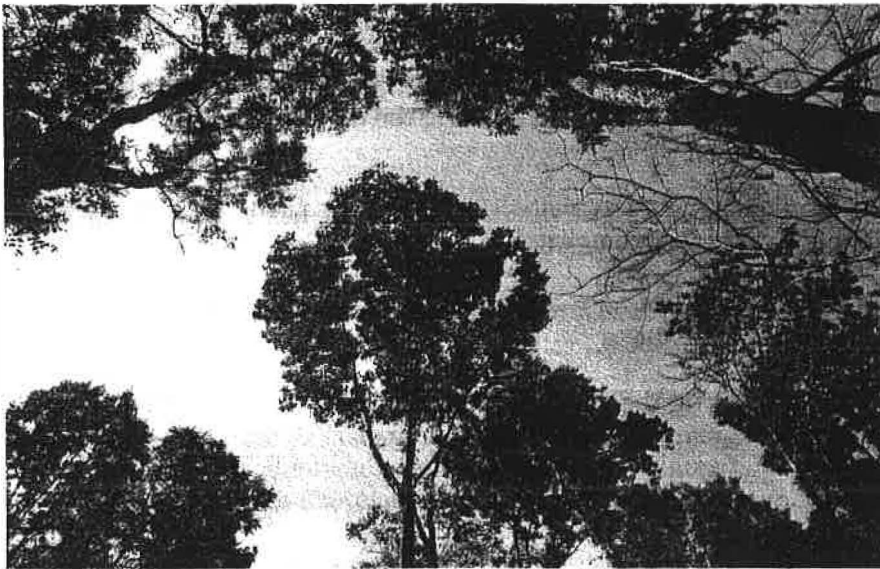
To help the forester, landowner, and other interested publics focus on the appropriate mix of multiple benefits that can be produced by managing individual trees, selected crop trees are categorized as timber, wildlife, aesthetic, or aquatic. Some crop trees fit into more than one category. For example, a red oak with a healthy crown and good form might be classified as a timber crop tree. Because red oak is an excellent mast producer, it might also be classified as a wildlife crop tree due to its ability to produce food for wildlife. Trees like blackgum and sourwood might be selected as aesthetic and wildlife crop trees because they produce attractive fall foliage and valuable food for wildlife. A yellow-poplar would not ordinarily be selected as a wildlife crop tree because its mast isn't highly preferred by many wildlife species. However, if it had an active den, or a cavity with potential to become a den site, it might be categorized as a wildlife crop tree due to the shelter it could provide for wildlife.

In mixed eastern hardwood stands, the species composition of the crop trees is frequently more varied to accommodate combined landowner objectives. Fortunately, in eastern hardwoods, a number of trees are capable of producing at least dual benefits. Obviously, stands with a mixture of species usually have greater potential to produce multiple benefits.

How Does It Work?

Whatever the objective(s), crop tree selection criteria must be established to help determine which trees have the greatest potential to produce the desired benefits. Where timber is an objective, the crop tree selection criteria favor those trees with the greatest potential to produce income. Where wildlife is an objective, the criteria favor those trees with the greatest potential to produce food and/or shelter.

Usually, increasing the production of benefits from individual trees involves promoting the vigor and growth of selected crop trees. Once the crop trees have been selected, a crown-touching release is applied which essentially removes all trees, except for other crop trees, whose crowns come in contact with, or touch, those of the crop trees. This does not mean that every tree that has not been chosen as a crop tree is removed from the stand — only those that interfere with the growth and development of selected crop trees are cut. The intensity of cutting can be adjusted by increasing or decreasing the number of crop trees released.



This red oak crop tree has received a "crown touching" release to accelerate its growth and increase mast production.

impressive according to research conducted at West Virginia University Forest, where the quantity of acorns/acre produced by released red oak trees was double that of areas where trees were not released.

What Are The Results?

How much growth can be expected using Crop Tree Management rather than traditional thinning practices or typical uneven-aged cuts? Research from the Northeastern Forest Experiment Station in Parsons, WV, where the crown-touching release concept was developed, reveals that growth can be nearly doubled when a full crown-touching release is applied to individual trees. Red oak, for example, can be expected to gain 3.4" in diameter over a 10-year period with a complete release. Mast production figures are just as

Comparison of Uneven-Aged Management to Crop Tree Management

Uneven-Aged Management

- Designed to accomplish even-flow of timber products by retaining a certain number of trees in each size class
- Marking guides governed by a minimum basal area, ratio of number of trees in successive dbh classes, and maximum largest tree diameter
- In classical form, involves intensive pre- and post-treatment inventories, with complex marking decision criteria
- Favors shade tolerant species
- Provides continuous forest cover
- Provides periodic income

Crop Tree Management

- Designed to accomplish stand specific landowner objectives through management of individual crop trees
- Marking guides governed by crop tree selection criteria and number of crop trees released on at least three sides
- Requires clear communication with landowner; simple marking decision criteria
- Depending on application, may favor tolerants or intolerants
- Provides option of continuous forest cover
- Provides option of providing periodic income

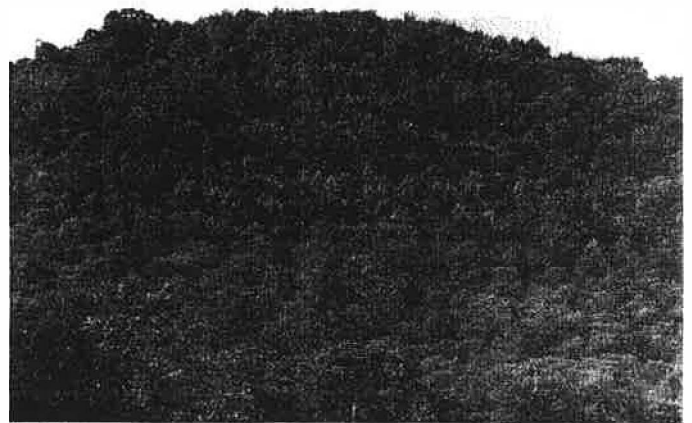
Developing a Crop Tree Management Prescription

As can be seen from the comparison chart, Crop Tree Management is a very flexible system, which means that the forester and landowner must communicate and plan for the desired outcome in each individual stand. The logical steps to follow are:

1. The forester and landowner communicate and agree that the landowner has a stewardship goal and is interested in management activities to accomplish it.
2. The forester, with or without the landowner, does a reconnaissance of the woodlot to obtain a perspective of what forest resources are available.
3. The forester interviews the landowner to help the client articulate stand specific objectives. Frequently, the forester needs to suggest uses and benefits to landowners to make sure they are aware of the relevant possibilities. To adequately appraise the client of potential objectives, the forester must inquire about the landowner's interests and the interests of family members.
4. With the landowner's written stand specific objectives, the forester writes crop tree selection criteria that can be used to select the crop trees that are most capable of accomplishing the landowner's objectives.
5. Based on conversations with the landowner, the forester assesses the landowner's sensitivity to heavy cutting in the woodlot. If the landowner indicates that a lot of slash and a dense understory are not tolerable, then the forester knows that relatively few trees can be released.



This landowner was willing to tolerate a heavy cut, so a relatively large number of crop trees were released, resulting in fairly dense slash on the ground. The cleared trail (left) provides the landowner with access through the area.



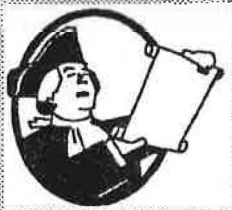
This photo shows how the stand appears from the valley. To the trained eye, management activity is visible, but not offensive.

To get a good idea of the landowner's tolerance for degree of cutting, the forester and landowner need to go to the woods where the forester can lay out a representative one-fifth-acre plot. The forester then selects the number of crop trees on the plot that he believes the landowner may be willing to release. He listens to the landowner's feedback and adjusts the cutting intensity by adjusting the number of crop trees to be released. The forester explains to the landowner why the individual crop trees selected on the plot are best able to accomplish the landowner's objectives.

6. The forester records the prescription for the stand, including the stand specific landowner objectives, the crop tree selection criteria to be used to select the trees to meet those objectives, and the number of crop trees per acre to be released on at least three sides. If a crop tree management demonstration area is available, the forester and landowner could visit the area to improve the landowner's awareness of what the area will look like after treatment. If no demonstration area is available, and the landowner has little or no previous exposure to tree cutting, the forester should show the client an example that best approximates how the property will appear after treatment.
7. The forester implements the prescription by marking the stand for treatment.

SUMMARY

Uneven-aged management has grown in popularity in recent years because it is perceived by many people to be less objectionable than even-aged management. This does not mean that it is the best we can do. There is nothing to prevent us from developing forest management systems that are better designed to accomplish landowner objectives. If our profession is to adequately serve our clients, we must not be inappropriately bound to our traditions. In the 1990's, we are faced with new forest management challenges that require some new thinking. Crop Tree Management should be part of that new thinking.



ANNOUNCEMENTS

Computer Software Notice

Many foresters are using the inventory program, CRUISE, written by Dr. Harry V. Wiant, Jr., at West Virginia University. He has just written a companion program, CONVERT, which allows input of data for CRUISE using an ASCII or non-document file created by your favorite word processing program. This greatly simplifies editing inventory data. CONVERT will also convert CRUISE data files to ASCII files. A section in GUIDE.DOC explains use of CONVERT and updates the documentation for CRUISE. For a copy of these and other useful programs, send an MS-DOS formatted 3-1/2" or 5-1/4" floppy diskette requesting CONVERT to Nancy Lough at our Morgantown address as listed on the inside cover.

Treeshelter Handbook Available

TREESHELTS, Forestry Commission Handbook 7, written by M. J. Potter, is now available for \$12.95 from Tubex, 75 Bidwell Street, Suite 105, St. Paul, MN 55107. The toll-free telephone number is: 1-800-24TUBEX. This handbook gives guidance on the use of treeshelters along with a balanced appraisal of their benefits and limitations. The topics covered are separated into those relating to the design of treeshelters, the benefits that may be anticipated, and correct usage. A brief description of the microclimate inside treeshelters is also included in this 48-page color publication.

Forestry Video Listing

A listing of forestry videos available from the 20 Northeastern Area State Foresters' offices has been compiled. Copies of this comprehensive list have been supplied to all NA State Foresters' offices and State Extension Foresters. If you would like a copy of the listing and cannot conveniently obtain it from these sources, you may contact Neil Lamson, Craig Locey, or Arlyn Perkey at the addresses listed on the back of this publication.



Neil Lamson's Computer Corner

Getting a Handle on the Information Explosion

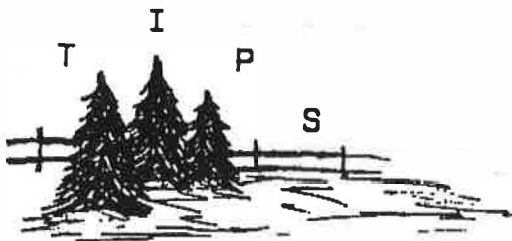
I am sure most of us realize we are in the middle of an "information explosion". We are bombarded with new information on every side... at work, home, church, volunteer work. As a professional forester (in the loosest sense of the word), I am tempted to throw up my hands and say, "I just can't keep up with the forestry literature, so I'm not going to try." Even if I could afford all the forestry trade journals (which I can't), I don't have time to read the free stuff, much less a stack of magazines and journals. Fortunately, computerized literature databases are available to help us get the right information quickly and easily.

Our Forest Service folks at the research laboratory in Delaware, Ohio, provide an easy way to access several computerized literature databases. They can access the National Agriculture Library database, AGRICOLA, which contains references from 1970 to the present. They can conduct literature searches by any combination of: 1) author, 2) title, and 3) subject and title. This is a good way to find out what has been published on a particular subject.

Our library employees are especially good at running down copies of publications, too. I have asked them for copies of some pretty obscure publications and they get them. I don't know how they do it (and I'm not going to ask), but I imagine they are "networked" on the computer with other libraries. I notice they get copies of a lot of publications from the National Agriculture Library (NAL). My impression is that if it's not in NAL, it's not worth knowing.

The U.S. Forest Service maintains FS INFO, a computerized literature database of forestry and forestry-related subjects authored by Forest Service employees or sponsored by Forest Service agencies. Approximately 500 new citations are added every month and published in the FS INFO Monthly Alert. This database is available to all Forest Service personnel through the Data General computer system. Individuals can easily conduct literature searches by any combination of author, subject, and title. Although it is not as complete as the AGRICOLA database, it is easy to use and will eventually include citations back to the late 1800's.

If you need copies of specific publications, contact Craig Locey, Arlyn Perkey, or myself. If we don't have it, we can get copies (if available) through U.S. Forest Service library facilities. Also, our library folks are happy to conduct a limited number of literature searches for us. Just let us know the subject and we will pass the request along. I have found that computerized literature databases are a real help in getting a handle on the information explosion.



Tip Number 10:

Because the Forest Stewardship program is the primary focus of this issue of the *Forest Management Update*, we want to share with our readers some information about its forerunner, Alabama's very successful TREASURE program. We'd like to acknowledge Bill Moody, State Forester of Alabama, and the Alabama Forestry Commission for kindly providing us with the background materials used to prepare this article.

History of TREASURE Forest:

The TREASURE Forest Program began in August of 1974, when the Alabama Forestry Planning Committee voted to adopt the concept behind TREASURE Forest. The program was put to a field test through county rural development committees and less than a year later in July, 1975, the first four TREASURE forests were certified.

What is a TREASURE Forest?

A forest is a complex and vital element of our environment. It is more than a place where trees grow. It is a combination of multiple uses which include provisions for wildlife, clean water, and fresh air; it is a place for recreation; or often just a quiet refuge. Recognizing all the values of the forest, the Alabama Forestry Planning Committee, made up of the heads of forestry related agencies and organizations in the State, encourages all Alabama landowners to participate in a program called TREASURE Forest. Symbolizing multiple use, the word TREASURE stands for Timber, Recreation, Environment, Aesthetics for a Sustained Useable Resource.

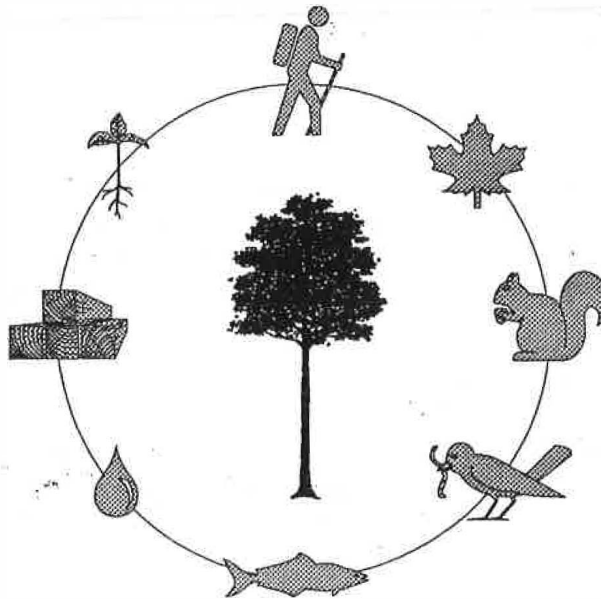
Simply stated, landowners decide which benefits they wish to accomplish most — timber production, wildlife, aesthetics, recreation, environmental enhancement, or soil and water protection. They then manage their woodlands to maximize these benefits while still providing for the other multiple benefits in a compatible fashion.

TREASURE Forest Requirements

The TREASURE Forest Program requires that landowners practice multiple-use management and work toward more than one management objective of their choice. They must have one primary objective and at least one secondary objective. The objectives may include timber, wildlife, recreation, aesthetics, or environmental enhancement. The choice is left up to the landowners, but their multiple-use management programs must include the other forest resources. The land must also be protected from insects, disease, wildfires, erosion, water quality problems, and any other abuse.

Junior TREASURE

A student, such as an FFA or 4-H member, may qualify for TREASURE certification under the Junior TREASURE Forest Program even if he/she is not a forestland owner.



Managing the forest for:

- *recreation*
- *aesthetics*
- *wildlife & fisheries*
- *water quality*
- *forest products*
- *soil productivity*

Primary contacts for forest management assistance in the Northeastern Area are:

Area Office

Lloyd Casey
USDA Forest Service
P.O. Box 6775
Radnor, PA 19087
(215) 975-4135

Morgantown Field Office

Arlyn Perkey
USDA Forest Service
P.O. Box 4360
Morgantown, WV 26505
(304) 285-1536

Durham Field Office

Neil Lamson
USDA Forest Service
P.O. Box 640
Durham, NH 03824-9799
(603) 868-5936

St. Paul Field Office

Craig Locey
USDA Forest Service
1992 Folwell Avenue
St. Paul, MN 55108
(612) 649-5236